U.S. Fish & Wildlife Service

Accomplishment Report

The Alpena Fishery Resources Office (Alpena FRO) is located in Alpena, Michigan and works to meet the U. S. Fish and Wildlife Service's Fishery and Ecosystem goals within Lake Huron, Western Lake Erie, and connecting waters of the St. Marys River, St. Clair River, and Detroit River. Activities include Aquatic Species Conservation and Management, Aquatic Habitat Conservation and Management, Cooperation with Native Americans, Leadership in Science and Technology, Partnerships and Accountability, Public Use, and Workforce Management – all of which are conducted in alignment with the Service Fisheries Program's Vision for the Future. The station is one of many field offices located within Region 3, the Great Lakes and Big Rivers Region.

Aquatic Species Conservation and Management

2006 Lake Whitefish (*Coregonus clupeaformis*) Sampling on the Detroit River

Submitted by Jim McFee
Fishery Biologist

Fisheries Biologists James Boase and Jim McFee, in conjunction with United States Geological Survey (USGS), completed a lake whitefish survey on the Detroit River. Sampling was conducted in both US and Canadian waters in the area downstream of the City of Detroit, from October 30 to December 4, 2006. Historically lake whitefish used the Detroit River for spawning, but in the recent past have been absent from the system. Sampling in the fall of 2005 produced two adult lake whitefish and numerous eggs, which warranted an increased sampling in 2006.

During the sampling period several methods were used to collect information on the stock structure of this species, including gillnets, egg mats, and egg pumping equipment. Service biologists concentrated on the gillnetting and assisted with the egg pumping, while USGS biologists focused on egg collection using the egg mats.

Nets were fished in three zones within the sample area. Before whitefish eggs were identified in the survey one zone was sampled per night with four 150 foot experimental gillnets. The mesh sizes ranged from three to six inch stretch on 25 foot panels. Once whitefish eggs were confirmed in the sampling gear netting was concentrated around the areas of egg collection.

During the first few weeks of the study drifting vegetation fouled the gillnets and diminished their effectiveness. Once the nets are choked with vegetation they become highly visible and avoidable by fish. As temperatures dropped the amount of vegetation in the river decreased resulting in increased catches.

Gillnetting produced no lake whitefish in 54 overnight sets, however several others species were collected. Gillnetting revealed eleven different species, including lake sturgeon and a steelhead (rainbow trout). Four lake sturgeon ranging in size from 365mm to 872mm received passive integrated transponder (PIT) tags and cinch FLOY tags after capture from the Fighting Island Complex, prior to release. The 365mm lake sturgeon is a young of the year (YOY), which was the first YOY sturgeon captured in the Detroit River in 40 years of sampling by biologists. A large, 712mm, male steelhead was also captured at the north end of Fighting Island, another rare find in the Detroit River.

Lengths were recorded for all other species, with more extensive data collected from walleye and yellow perch. Additional data collected included, aging structures (otoliths and dorsal spines), sex data, and diet data of 33 walleye and 6 yellow perch. Aging structures will be analyzed this winter back at the lab.

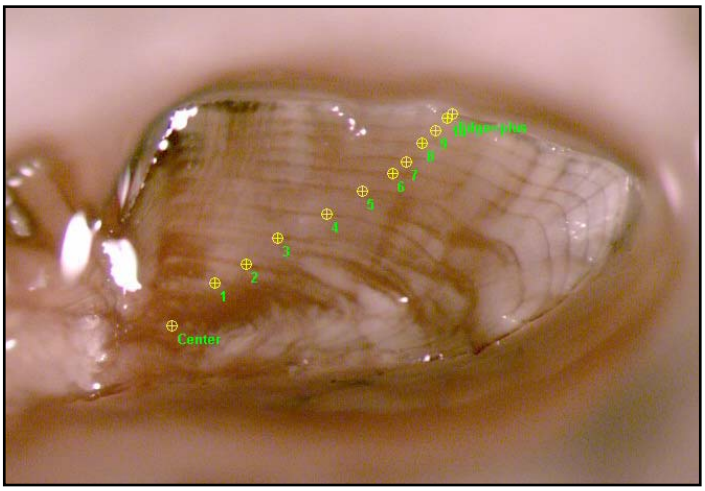
This project is an ongoing look at the lake whitefish stocks that use the Detroit River for spawning. Sampling will continue in the fall of 2007 as water temperatures approach 10^{o}C. In addition to gillnets some alternative gears may be used to capture whitefish to increase the number of adults that are handled.

This effort provided a unique opportunity to create new partnerships with both governmental and non-governmental agencies to achieve common Great Lakes management objectives. Maintaining these collaborative relationships allows for the most efficient use of limited human and fiscal resources. This project is consistent with the “Partnerships and Accountability”, “Aquatic Species Conservation and Management”, and “Leadership in Science and Technology” focus areas of the Fisheries Program’s Vision for the Future.

Otolith Analysis from Fish Collected During 2006 Field Activities

Submitted by Scott Koproski
Fishery Biologist

Fishery Biologist Scott Koproski began working on otolith samples collected for age and growth analysis during the 2006 fishery independent lake whitefish survey. Otoliths were collected from all lake whitefish, lake trout, and burbot sampled during this survey. The otolith is the first calcified structure that begins to develop during the egg stage. It grows towards the anterior end of a fish and by viewing a cross-section of the otolith you can begin to see zones of summer and



winter growth. The pattern resembles the rings of a tree. Annual growth can be identified by counting the number of zones of compressed winter growth. In addition to counting the zones of winter growth you must pay special attention to the edge of the structure. Annulus formation varies geographically with northern regions seeing annulus formation later in the summer compared to southern regions. The growth past the last annuli must be classified as either new growth or growth from the previous year. If it is growth from the pervious year, the annulus has not formed yet and the edge must be counted when assigning an age to the structure.

Koproski uses the "crack and burn" technique to differentiate the zones of summer and winter growth. By cracking the otolith laterally and placing the cracked portion into an alcohol flame, the cracked portion begins to darken to a golden brown color. Once the otolith is burned, it can be viewed using a stereo-microscope. To help view the structure a drop of mineral oil is placed on the cracked section. The mineral oil smoothes out the structure while viewing it under the stereo-microscope and allows the age interpreter to see the image more clearly.

This work is an example for Alpena FRO's commitment to the Service's Fisheries Program Vision for the Future priorities of: "Aquatic Species Conservation and Management", "Partnerships and Accountability", and "Cooperation with Native American Tribes".

Partnerships and Accountability

A Conservation Roundtable

Submitted by Heather Rawlings
Fish and Wildlife Biologist

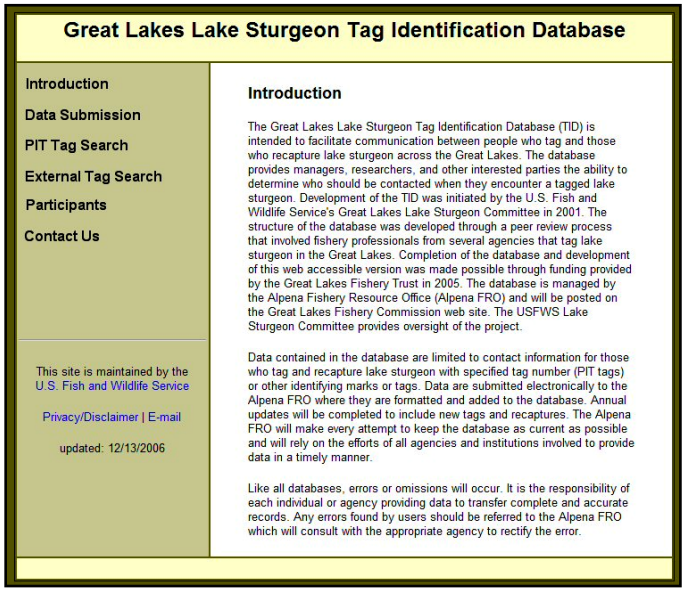
A Conservation Roundtable was held in Traverse City, Michigan on December 4, 2006 at Northwestern Michigan College's Great Lakes Campus. Sponsored by Senator Carl Levin, the Great Lakes Nonprofit Institute, and the Great Lakes Water Studies Institute, this roundtable was established to showcase Service habitat conservation granting programs. Carl Levin's representative, Harold Chase, provided opening remarks for the session.

Four Service biologists highlighted their programs of specialty, which included: Stewart Cogswell, (Green Bay FRO) who presented the Fish Passage program, Bob Kavetsky (East Lansing FO), the Coastal Program, Heather Rawlings (Alpena FRO) the Partners for Fish and Wildlife program, and Christie Deloria (East Lansing FO, Marquette) the Endangered Species and Coastal Wetland Grant programs. Craig Czarnecki (East Lansing FO) was the MC, and Jim Hudgins (East Lansing PLO) led the wrap- up session. The forum was casual, with abundant opportunity for the audience to ask questions and voice concerns. The invitees for the roundtable were local Traverse City non-profit conservation organizations, conservation districts, land conservancies, and local government entities. Approximately 35 citizens attended the roundtable. Attendees completed an evaluation at the end of the session, and gave both the speakers and facilities high marks. This event will serve as a template for upcoming roundtable sessions that have been requested by other Michigan congressional offices. It was an effective forum for the Service to interact with local partners.

Outreach events such as this Conservation Roundtable contribute toward the "Partnerships and Accountability" component of the Service Fisheries Program's Vision for the Future.

Tag Identification Database Contains Over 12,500 Tag Numbers

Submitted by Adam Kowalski
Fish and Wildlife Biologist



During the month of December, Fishery Biologist Adam Kowalski completed the final updates of the database and met the remaining commitments of a grant funded by the Great Lakes Fishery Trust. The grant was awarded in 2004 to construct and maintain a database to house tag information such as tag type, tag number, tag location, and tagger contact information. The database has been operational for over a year now and contains over 12,500 passive integrated transponder (PIT) tags and over 100 tag sequences for external tags. Kowalski completed the final report and submitted it to the Great Lakes Fishery Trust and final payment has been received. Kowalski will continue to maintain and update the database by requesting and entering tagging information annually. Feedback to Kowalski has been positive and the database seems to be getting a lot of use by biologists looking up information for tagged lake sturgeon they have captured. The database is housed at the Great Lakes Fishery Commission's web site and can be viewed at the following web address http://www.glfc.org/sturgeontag/index.htm.

This database will improve the information sharing process between agencies and the general public who may encounter tagged lake sturgeon. The multi-partner nature of this work is consistent with the Service's goal of establishing and maintaining open, interactive

communication with its partner agencies under the "Partnerships and Accountability" priority of the Fisheries Program Vision for the Future.

For more information about Alpena FRO programs and activities contact us at:

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